

### **REMARKS**

This amendment is responsive to the Final Office Action dated January 3, 2005.  
Applicant has amended claims 1-4. Claims 1-6 are pending.

#### **Claim Amendments**

Claim 1 has been amended to clarify the input step a) and the determining step d). Amended claim 1 recites inputting from a user for at least one specified cell, a required value, or the required value and one or more constraints, and further recites that the value and the constraints are taken into account in calculations. Amended claim 1 recites determining from the one or more parent/child tables the one or more target cells, each requiring a back-solving calculation to set a value of the specified cell to the required value. Claims 3 and 4 have been amended to add changes corresponding to those of claim 1.

In addition, the Applicant has amended claims 1-4 to address certain informalities. For example, claims 1, 3 and 4 have been amended to replace “sub cube” with “sub-cube”. Claims 1, 3 and 4 have been amended to replace “multi dimensional” with “multidimensional”. Claim 2 has been amended for clarification.

The amendment to the claims is fully supported by the application as originally filed. In particular, support for the amendment to claims 1, 3 and 4 can be found, for example, on paragraph [0038] of page 8, paragraph [0052] of page 11, and paragraph [0079] of page 16 to [0085] of page 17. No new matter has been introduced by way of the amendment.

Applicant respectfully requests the Examiner to enter the amendment.

#### **Claim Rejection Under 35 U.S.C. § 102**

In the Office Action, the Examiner rejected claims 1-6 under 35 U.S.C. 102(e) as being anticipated by Shah et al. (US 20020099692), hereinafter referred to as Shah. Applicant respectfully traverses the rejection to the extent such rejection may be considered applicable to the amended claims. Shah fails to disclose each and every feature of the claimed invention, as

required by 35 U.S.C. 102(e), and provides no teaching that would have suggested the desirability of modification to include such features.

Claim 1 is directed to a method for the calculation and back-solving of complex relationships in a sub-cube of a multidimensional database system. Claims 3 and 4 are system and computer program product claims, which correspond to claim 1. The system/method of the present invention uses a parent/child table to determine one or more target cells, each of which requires a back-solving calculation to set a value of a specified cell to a user input value. In performing backsolving for a target cell, a value of a parent cell for the target cell is recalculated.

In contrast, Shah discloses aggregate fact tables 130 (Figure 1), a star 300 having a single fact table 125a and a number of dimension tables 125b (Figure 3A), and a metadata structure 145 (hierarchy). A set of metadata structure 145 describes the contents of, and relationships between, the various fact and dimension tables 125a, 125b (paragraph [0024] of Shah). The aggregate fact tables 130 contain values summarized from the base fact tables 125a to certain specified levels of one or more dimensions (paragraph [0024] of Shah). The star 300 is associated with the aggregate fact table (paragraph [0039] of Shah).

When calculating a metric, an analytical server 120 described in Shah selects a star(s) 300. The analytical server 120 conducts the queries for each measure on the selected tables 130. After generating the queries, the analytical server 120 calculates the measures, and calculates the metrics (paragraph [0054] of Shah).

It is respectfully submitted that Shah neither discloses nor suggests back-solving calculation, but rather teaches the use of (precalculated) aggregation values stored in a hierarchy of structures. Accordingly, Shah fails to disclose or suggest a parent/child table for the back-solving calculation as required by Applicant's claims.

According to claims 1, 3 and 4, any constraint(s) inputted from a user is linked to a specified cell, and these constraints include cell properties not directly related to the dimensional values as: "...any constraints to be applied, such as values 'locked for recalculation'..." (paragraph [0045] of page 9 in the original application). By contrast, the constraints contemplated in Shah are limited to those "...constrained on dimensional values..." (paragraph [0023] of Shah).

According to claims 1, 3 and 4, a set of prioritisation rules is provided to select a calculation from a plurality of calculations. By contrast, the nature of the prioritisation rules as defined in Shah (exemplified by the discussion at paragraph [0029] of Shah where the example relates to calendar periods) is that they are concerned with the level of aggregation for a particular value.

Hence it is respectfully submitted that claims 1 to 6 are new and patentable in view of the cited reference. For at least these reasons, Shah fails to disclose each and every limitation set forth in claims 1-6. Withdrawal of the rejection under 35 U.S.C. 102(e) is requested.

### CONCLUSION

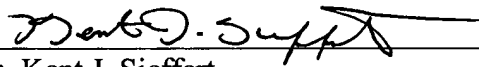
All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

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